<u>Amendments to the Claims:</u>

This listing of claims will replace all prior versions, and listings, of claims in the application:

<u>Listing of Claims:</u>

1.   (Cancelled).

2.   (Previously Presented) A method for communicating information in a network, comprising:

a) sending a request for information about a destination node from a source node to a server node that responds to such requests on behalf of the destination node comprises sending a Next Hop Resolution Protocol (NHRP) resolution request from a NHRP capable source node to a NHRP server node that responds to such requests on behalf of the destination node;

b) forwarding the request from the server node to the destination node;

c) sending a response to the request from the destination node to the server node; and

d) forwarding the response from the server node to the source node.

3.   (Original) The method of claim 2, wherein forwarding the request from the server node to the destination node comprises forwarding the NHRP resolution request from the NHRP server node to the destination node.

4.   (Original) The method of claim 3, wherein sending a response to the request from the destination node to the server node comprises sending a NHRP resolution reply to the NHRP resolution request from the destination node to the NHRP server node.

5.   (Original) The method of claim 4, wherein forwarding the response from the server node to the source node comprises forwarding the NHRP resolution reply from the NHRP server node to the NHRP capable source node.

6.   (Original) A method for communicating internetwork layer address to subnetwork layer address resolution information between peer stations in a nonbroadcast, multiple access subnetwork, comprising:

a) generating at a source station a next hop resolution protocol (NHRP) resolution request to obtain internetwork layer address to subnetwork layer address resolution information for a destination station, the NHRP resolution request specifying the internetwork layer address for the destination station;

b) transmitting the NHRP resolution request to a next hop resolution protocol server (NHS) within the nonbroadcast multiple access subnetwork that serves the destination station;

c) determining at the NHS to forward the NHRP resolution request to the destination station;

d) generating at the destination station a NHRP resolution reply providing the internetwork layer address to NBMA subnetwork layer address resolution information;

e) transmitting the NHRP resolution reply from the destination station to the NHS; and

f) transmitting the NHRP resolution reply from the NHS to the source station.

7.   (Original) The method of claim 6, wherein determining at the NHS to forward the NHRP resolution request to the destination station further comprises determining that the destination station previously transmitted a NHRP registration request to the NHS requesting the NHS to forward any NHRP resolution request that specified the internetwork layer address for the destination station to the destination station.

8.   (Original) The method of claim 7, wherein determining that the destination station previously transmitted a NHRP registration request to the NHS requesting the NHS to forward any NHRP resolution request that specified the internetwork layer address for the destination station to the destination station further comprises determining that the destination station previously transmitted a NHRP registration request to the NHS, the NHRP registration request specifying a unique time/length/value (TLV) extension value that the NHS recognized as requesting the NHS to forward any NHRP resolution request that specified the internetwork layer address for the destination station to the destination station.

9. (Original) The method of claim 6, wherein determining at the NHS to forward the NHRP resolution request to the destination station further comprises determining that the NHS was previously configured to request the NHS to forward any NHRP resolution request that specified the internetwork layer address for the destination station to the destination station.

10. (Original) The method of claim 6, wherein determining at the NHS to forward the NHRP resolution request to the destination station further comprises determining that the NHS previously received a communication via an internetworking protocol instructing the NHS to forward any NHRP resolution request that specified the internetwork layer address for the destination station to the destination station.

11. (Original) A method for communicating internetwork layer address to subnetwork layer address resolution information between peer stations in a nonbroadcast, multiple access subnetwork, comprising:

a) generating at a source station a next hop resolution protocol (NHRP) resolution request to obtain internetwork layer address to subnetwork layer address resolution information for a destination station, the NHRP resolution request specifying the internetwork layer address for the destination station;

b) transmitting the NHRP resolution request to a next hop resolution protocol server (NHS) within the nonbroadcast multiple access subnetwork that serves the destination station;

c) determining at the NHS to forward the NHRP resolution request to the destination station;

d) determining at the destination station whether to receive or reject the NHRP resolution request forwarded from the NHS;

e) generating at the destination station a NHRP resolution reply providing the internetwork layer address to NBMA subnetwork layer address resolution information if the destination station determined to receive the NHRP resolution request forwarded from the NHS;

f) transmitting the NHRP resolution reply from the destination station to the NHS; and

g) transmitting the NHRP resolution reply from the NHS to the source station.

Appl. No. 09/429,047
Amdt. Dated 07/062004
Reply to Office Action of 05/03/2004

12.   (Original) The method of claim 11, wherein determining at the destination station whether to receive or reject the NHRP resolution request forwarded from the NHS comprises determining at the destination station whether to receive or reject the NHRP resolution request forwarded from the NHS based on management signaling.

13.   (Original) The method of claim 11, wherein determining at the destination station whether to receive or reject the NHRP resolution request forwarded from the NHS comprises determining at the destination station whether to receive or reject the NHRP resolution request forwarded from the NHS based on user configuration.

14.   (Cancelled).

15.   (Original) An article of manufacture comprising a computer readable medium having computer readable program code means embodied thereon for communicating internetwork layer address to subnetwork layer address resolution information between peer stations in a nonbroadcast, multiple access subnetwork, comprising:
        computer readable program code means at a next hop resolution protocol server (NHS) within the nonbroadcast multiple access subnetwork that serves a destination station, the computer readable program code means receiving a next hop resolution protocol (NHRP) resolution request from a source station to obtain internetwork layer address to subnetwork layer address resolution information for a destination station, the NHRP resolution request specifying the internetwork layer address for the destination station;
        computer readable program code means for determining at the NHS to forward the NHRP resolution request to the destination station;
        computer readable program code means at the NHS for receiving from the destination station a NHRP resolution reply providing the internetwork layer address to NBMA subnetwork layer address resolution information; and
computer readable program code means at the NHS for transmitting the NHRP resolution reply from the NHS to the source station.

16.   (Original) A method for communicating internetwork layer address to subnetwork layer address resolution information in a nonbroadcast, multiple access subnetwork, comprising:

a) generating at a source station a next hop resolution protocol (NHRP) resolution request to obtain internetwork layer address to subnetwork layer address resolution information for a destination station, the NHRP resolution request specifying an internetwork layer address for the destination station;

b) transmitting the NHRP resolution request to a next hop resolution protocol server (NHS) within the nonbroadcast multiple access subnetwork that serves a plurality of destination stations sharing the internetwork layer address;

c) determining at the NHS to forward the NHRP resolution request to a one of the plurality of destination stations according to an arbitration scheme;

d) generating at the one of the plurality of destination stations a NHRP resolution reply providing the internetwork layer address to NBMA subnetwork layer address resolution information;

e) transmitting the NHRP resolution reply from the one of the plurality of destination stations to the NHS; and

f) transmitting the NHRP resolution reply from the NHS to the source station.

17.   (Original) A method of communicating internetwork layer address to subnetwork layer address resolution information, comprising:

a) generating at a source station a next hop resolution protocol (NHRP) resolution request to obtain internetwork layer address to subnetwork layer address resolution information for a destination station, the NHRP resolution request specifying an internetwork layer address for the destination station;

b) transmitting the NHRP resolution request to a next hop resolution protocol server (NHS) within the nonbroadcast multiple access subnetwork that serves a plurality of destination stations sharing the internetwork layer address;

c) determining at the NHS to forward the NHRP resolution request to one of the plurality of destination stations according to an arbitration scheme;

d) generating at the one of the plurality of destination stations one of: a NHRP resolution reply providing the internetwork layer address to NBMA subnetwork layer address resolution information; and a negative NHRP resolution reply that fails to provide the internetwork layer address to NBMA subnetwork layer address resolution information;

e) transmitting the NHRP resolution reply from the one of the plurality of destination stations to the NHS;

f) repeating c through e until one of: the NHRP resolution reply provides the internetwork layer address to NBMA subnetwork layer address resolution information; and the last of the one of the plurality of destination stations transmits the NHRP resolution reply to the NHS; and

f) transmitting the NHRP resolution reply from the NHS to the source station.

18.   (Original) An article of manufacture comprising a computer readable medium having computer readable program code means embodied thereon for communicating internetwork layer address to subnetwork layer address resolution information, comprising:

computer readable program code means for generating at a source station a next hop resolution protocol (NHRP) resolution request to obtain internetwork layer address to subnetwork layer address resolution information for a destination station, the NHRP resolution request specifying an internetwork layer address for the destination station;

computer readable program code means for transmitting the NHRP resolution request to a next hop resolution protocol server (NHS) within the nonbroadcast multiple access subnetwork that serves a plurality of destination stations sharing the internetwork layer address;

computer readable program code means for determining at the NHS to forward the NHRP resolution request to a one of the plurality of destination stations according to an arbitration scheme;

computer readable program code means for generating at the one of the plurality of destination stations a NHRP resolution reply providing the internetwork layer address to NBMA subnetwork layer address resolution information;

computer readable program code means for transmitting the NHRP resolution reply from the one of the plurality of destination stations to the NHS; and

computer readable program code means for transmitting the NHRP resolution reply from the NHS to the source station.

19.   (Cancelled).

20.   (Original) A method for communicating internetwork layer address to subnetwork layer address resolution information in a nonbroadcast, multiple access subnetwork, comprising:

a) receiving at a next hop resolution protocol server (NHS) a next hop resolution protocol (NHRP) resolution request that was generated and transmitted by a source station to obtain internetwork layer address to subnetwork layer address resolution information for a destination station that is served by the NHS, the NHRP resolution request specifying the internetwork layer address for the destination station;

b) determining at the NHS to forward the NHRP resolution request to the destination station;

c) receiving an NHRP resolution reply providing the internetwork layer address to NBMA subnetwork layer address resolution information generated and transmitted by the destination station to the NHS; and

d) transmitting the NHRP resolution reply from the NHS to the source station.